

TAXONOMIC POSITION OF *ALLOPHARYNX* STROMA, 1928, *MICRODERMA* MEHRA, 1931 AND *GLOSSIMETRA* MEHRA, 1937

A. N. GUPTA and P. N. SHARMA

(Department of Zoology, University of Udaipur, Udaipur, Rajasthan, India)

ABSTRACT: Taxonomic allocation of the genus *Glossimetra* MEHRA, 1937 along with *Allopharynx* STROMA, 1928 and *Microderma* MEHRA, 1931 are discussed. Based on phylogenetic sequential arguments it is proposed that the genera *Allopharynx* and *Microderma* be down graded to subgeneric rank under the genus *Glossimetra*.

This is the third paper of the series on the genus *Glossimetra* MEHRA, 1937. First being "Review of the genus *Glossimetra* MEHRA, 1937 and proposed synonymy of *G. narmadi* DWIVEDI, 1967 and *G. tamiansis* DWIVEDI, 1967 with *G. orientalis* MEHRA, 1937". (1970); the second being "Status of the genus *Glossimetra* MEHRA, 1937 (Trematoda: Digenea) in Styphlotrematinae BAER, 1924, Styphlodoridae DOLLFUS, 1937 and Astiotrematinae BAER, 1924 complex" (loc. cit.). In the present paper an attempt is being made on the study of these three genera assigned by YAMAGUTI under subfamily Astiotrematinae, while SKRJABIN and others assign them except *Microderma* in the subfamily Styphlodoridae DOLLFUS, 1937. This genus according to SKRJABIN's concept of taxonomy finds place under Lepodermatinae LOOSS, 1899 and Plagiorchinae PRATT, 1902. Lepodermatinae, however, is not recognized by YAMAGUTI, who further does not recognize the list of all the genera SKRJABIN assigns under the subfamilies.

The present authors are of the opinion that fixity of organs is clearly seen in these genera. The genera *Allopharynx* STROMA, 1928, *Microderma* MEHRA, 1931 should be down graded from generic rank to the subgeneric rank and be assigned under the genus *Glossimetra*. The phylogenetic sequence being that from *Glossimetra*, forms belonging to *Allopharynx* were evolved and then from *Allopharynx*, forms belonging to

Microderma are evolved. These observations are based on the following points:

1. Position of ventral sucker in relation to oral sucker.
2. Shortening in length of oesophagus.
3. Change in the shape of the testes.
4. Extension of cirrus pouch.
5. Position of ovary.
6. Position of genital opening.

1. The ventral sucker is situated in anterior third of body in *Glossimetra*, it is close to oral sucker in *Allopharynx* while in the anterior third of body in *Microderma*.

2. Similarly the length of oesophagus is from moderate length in *Glossimetra* to short in *Allopharynx* then gradually practically absent in *Microderma*.

3. Testes are of transversely elongated shape in *Glossimetra* to short rounded in the other two genera viz., *Microderma* and *Allopharynx*. The just postequatorial position of testes in *Glossimetra* becomes postacetabular in *Allopharynx* and again remains postacetabular in *Microderma*.

4. The cirrus sac in its extension shows a tendency towards shortening in length. It is evident from *Glossimetra* where the extension of cirrus sac is extensively postacetabular reaching to ovary while reaching back of acetabulum in *Allopharynx* and to a similar position in *Microderma*.

5. The position of ovary in *Glossimetra* has been shown to be situated in mid region

of body: pre-equatorial in *Allopharynx* and half way between anterior testes and ventral sucker in *Microderma*.

6. The genital opening is immediately preacetabular in *Glossimetra* slightly shifted from the immediate preacetabular position in *Allopharynx* to preacetabular position in *Microderma*.

The above stated are some of the diagnostic characters which are frequently utilized in showing the phylogenetic relationship. It is obvious from the above data that differences enumerated above can hardly form characters of generic distinctions. On the other hand characters in which they resemble to a greater extent outnumber these characters, as stated below. All the three genera are characterized by the absence of receptaculum seminis, by the presence of metraterm, by having vitelline follicles grouped into bunches which are more or less not in continuity. These are also having their both extremities free from vitelline follicle bunches. These show further similarity in shape and spinose character of their body wall. In the extension of uterine coils from the posterior end and its method of separation of the testes by passing through them.

In caecal extension towards the posterior end of the body. Whatever minor differences one encounters in shape is due to the difference in the technique fixation.

ACKNOWLEDGEMENT

Authors feel grateful to Prof. M. YOKOGAWA for critical analysis of the manuscript and also owe to C. S. I. R. India.

REFERENCES

- 1) DWIVEDI, M. P. (1967): Description of two new species of the genus *Glossimetra* MEHRA, 1937 (Plagiorchidae: Trematoda). *Proc. Indian Acad. Sci. Sec. B*, 65 (5), 200-209.
- 2) MEHRA, H. R. (1928): On a new genus *Spinometra* belonging to the family Lepodermatidae from Kachuga dhongoka. *Proc. 15 Ind. Sci. Congr.* P. 200.
- 3) MEHRA, H. R. (1931): On a new trematode *Microderma elinguis*. *Parasit.*, 23, 191-195.
- 4) MEHRA, H. R. (1931): A new genus (*Spinometra*) of the family Lepodermatidae ODHNER (Trematoda) from a tortoise, with a systematic discussion and classification of the family. *Parasit.*, 23, 157-178.
- 5) SKRJABIN, K. I. (1964): Keys to the trematodes of animals and man. Univ. Illinois Urbana.
- 6) YAMAGUTI, S. (1958): Systema Helminthum Vol. I. The trematodes of vertebrates. Int. Sci. Pub. Inc., New York.